

# Work Order ID 127881

December-17-14 1:58:54 PM

**\*127881\***

Page 1

Item ID: D3779-043  
Revision ID:  
Item Name: Handle Assembly (Interior)

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Stop **\*NS2\***

Start Date: 12/17/14 Start Qty: 1.00  
Required Date: 12/17/14 Req'd Qty: 1.00

**\*1\***

**\*1\***

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 14-12-23 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
| D3779    | C            |

|     |                |      |  |  |  |  |  |  |                   |
|-----|----------------|------|--|--|--|--|--|--|-------------------|
| 100 | FLOW WATER JET | 0.00 |  |  |  |  |  |  | DAS<br>23<br>9-89 |
|-----|----------------|------|--|--|--|--|--|--|-------------------|

**\*100\***

Waterjet

FLOW CNC Waterjet

6061.125"

Memo

1-Cut D3779-5 as per Dwg D3779

Dwg Rev: C

Prog Rev: C

2-Deburr if necessary

110

QC2- Inspect parts off machine FAI/FAIB

0.00

**\*110\***

QC

Quality Control

Memo

0.00

120

QC8- Inspect parts - second check

0.00

**\*120\***

QC

Quality Control

Memo

0.00

DAS  
38  
9-89

JAN 13 2015

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other                                                                                                                                                                                                                                                          |

**Work Order ID 127881****\*127881\***

Page 2

Item ID: D3779-043

Accept

**\*N19000040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Handle Assembly (Interior)

Start Date: 12/17/14 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 12/17/14 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

130

0.00

**\*130\***

Small Fab

Small Fab

Memo

0.00

Small Fab

1- counter sink holes as per dwg D3779  
2- deburr1 FF JAN 15 2015

140

0.00

**\*140\***

QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

DAS  
38  
9-881  

JAN 15 2015

150

0.00

**\*150\***

Chemical Conversion Coat per QSI005 4.1

HandFinish

Memo

0.00

Hand Finishing

1 15-1-15 [Signature]

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other                                                                                                                                                                                                                                                          |

**Work Order ID 127881**

December-17-14 1:58:54 PM

**\*127881\***

Page 3

Item ID: D3779-043

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Handle Assembly (Interior)

Start Date: 12/17/14 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 12/17/14 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***Stop **\*NR2\***

| Sequence ID/<br>Work Center ID                | Operation<br>Description                                                                      | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp                   |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------------------------|
| 160<br><b>*160*</b><br>QC<br>Quality Control  | QC7-Inspect Chemical Conversion Coat<br><br>Memo                                              | 0.00<br><br>0.00     |         |        |              | 1             |               |                  | DAB<br>38<br>9-89<br>JAN 16 2015 |
| 180<br><b>*180*</b><br>Small Fab<br>Small Fab | Small Fab<br><br>Memo<br>1- rivet D3203-1 handle to D3779-5 plate as per dwg D3779 per QSI003 | 0.00<br><br>0.00     |         |        |              | 1             | FF            |                  | Jan 23-15                        |
| 190<br><b>*190*</b><br>QC<br>Quality Control  | QC5- Inspect part completeness to step on W/O<br><br>Memo                                     | 0.00<br><br>0.00     |         |        |              | 1             |               |                  | DAB<br>38<br>9-89<br>JAN 23 2015 |

DQA:

Date: 15/04/08



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: 15/04/02

Work Order update only ☐

|                     |                                               |                                        |                                    |                                              |                                                 |  |
|---------------------|-----------------------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|-------------------------------------------------|--|
| Work Order: 127881  | <b>DISPOSITION</b>                            |                                        | <b>AGAINST DEPARTMENT/PROCESS</b>  |                                              |                                                 |  |
| Part No. 123779-043 | Rework <input checked="" type="checkbox"/>    | Skid-tube <input type="checkbox"/>     | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/>           | Engineering <input checked="" type="checkbox"/> |  |
| NCR No. 15-4779     | Scrap <input type="checkbox"/>                | Machining <input type="checkbox"/>     | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/>   | Quality <input type="checkbox"/>                |  |
|                     | Use-as-is <input type="checkbox"/>            | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>                  |  |
|                     | Suspected Unapproved <input type="checkbox"/> | Large Fab <input type="checkbox"/>     | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/>            |                                                 |  |

| Root Cause                                 | Date     | Step | Qty | Description of work order update or non-conformance                                                                        | Initial Chief Eng                         | Action Description                                                                   | Sign & Date    | Verification                   | QC Inspector               |
|--------------------------------------------|----------|------|-----|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------|----------------|--------------------------------|----------------------------|
| Design <input checked="" type="checkbox"/> | 15/01/23 | 120  | 1   | UPDATE Rivet FROM MS 20426 AD 10-9 A TO MC 20426 A 10-9<br>Due To handle Damage (Product Improvement)<br><br>R: new Rivets | <br>22012<br>15/01/23<br>A.P.<br>15.02.04 | Replace<br>MS 20426 A 10-9<br>M 131339<br>update <del>Don</del><br>Ref to Part 4-332 | <br>Jan. 23-15 | <br>DAS 38 9-89<br>JAN 23 2015 | <br>DAS 9 9-89<br>15-01-23 |
| Doc/Data <input type="checkbox"/>          |          |      |     |                                                                                                                            |                                           |                                                                                      |                |                                |                            |
| Equip/Tooling <input type="checkbox"/>     |          |      |     |                                                                                                                            |                                           |                                                                                      |                |                                |                            |
| Handling/Pack <input type="checkbox"/>     |          |      |     |                                                                                                                            |                                           |                                                                                      |                |                                |                            |
| Material <input type="checkbox"/>          |          |      |     |                                                                                                                            |                                           |                                                                                      |                |                                |                            |
| Operator <input type="checkbox"/>          |          |      |     |                                                                                                                            |                                           |                                                                                      |                |                                |                            |
| Offset/Setup <input type="checkbox"/>      |          |      |     |                                                                                                                            |                                           |                                                                                      |                |                                |                            |
| Process <input type="checkbox"/>           |          |      |     |                                                                                                                            |                                           |                                                                                      |                |                                |                            |
| Supplier <input type="checkbox"/>          |          |      |     |                                                                                                                            |                                           |                                                                                      |                |                                |                            |
| Training <input type="checkbox"/>          |          |      |     |                                                                                                                            |                                           |                                                                                      |                |                                |                            |
| Transport <input type="checkbox"/>         |          |      |     |                                                                                                                            |                                           |                                                                                      |                |                                |                            |
| Unapproved <input type="checkbox"/>        |          |      |     |                                                                                                                            |                                           |                                                                                      |                |                                |                            |

## FAULT CATEGORY

| Landing Gear                                      | General                                       |                                                            |                                               |
|---------------------------------------------------|-----------------------------------------------|------------------------------------------------------------|-----------------------------------------------|
| <input type="checkbox"/> Bending                  | <input type="checkbox"/> Bend                 | <input type="checkbox"/> Folio/Program                     | <input type="checkbox"/> Outside Dimensions   |
| <input type="checkbox"/> Centre Not Concentric    | <input type="checkbox"/> BOM/Route            | <input type="checkbox"/> Grain                             | <input type="checkbox"/> Over/Under tolerance |
| <input type="checkbox"/> Cracks                   | <input type="checkbox"/> Broken/Damage/Defect | <input type="checkbox"/> Hardware                          | <input type="checkbox"/> Part Incorrect       |
| <input type="checkbox"/> Crimp/Kink/Ripple/Wave   | <input type="checkbox"/> Burrs                | <input type="checkbox"/> Inspection Incomplete/Unqualified | <input type="checkbox"/> Part Lost/Missing    |
| <input type="checkbox"/> Cuffs                    | <input type="checkbox"/> Contamination        | <input type="checkbox"/> Instructions Incomplete/Unclear   | <input type="checkbox"/> Part Moved           |
| <input type="checkbox"/> Crushing                 | <input type="checkbox"/> Countersink          | <input type="checkbox"/> Misaligned/off center             | <input type="checkbox"/> Positioned Wrong     |
| <input type="checkbox"/> Heat Treat               | <input type="checkbox"/> Cut Too Short        | <input type="checkbox"/> Mislabeled                        | <input type="checkbox"/> Power Loss/Surge     |
| <input type="checkbox"/> Inspection Strip in Tube | <input checked="" type="checkbox"/> Drawing   | <input type="checkbox"/> Misread                           | <input type="checkbox"/> Pressure/Forced      |
| <input type="checkbox"/> Marks/Chatter            | <input type="checkbox"/> Drill Holes          | <input type="checkbox"/> Off-set                           | <input type="checkbox"/> Set-up               |
| <input type="checkbox"/> Turning Sequence         | <input type="checkbox"/> Finish               | <input type="checkbox"/> Out of Calibration                | <input type="checkbox"/> Temperature/Cure     |
| <input type="checkbox"/> Wave/Twist in Tube       | <input type="checkbox"/> Fit/Function         | <input type="checkbox"/> Out of Sequence                   | <input type="checkbox"/> Weld                 |
|                                                   |                                               |                                                            | <input type="checkbox"/> Wrong Stock Pulled   |
|                                                   |                                               |                                                            | <input type="checkbox"/> Other                |

# Work Order ID 127881

December-17-14 1:58:54 PM

**\*127881\***

Page 4

Item ID: D3779-043 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Handle Assembly (Interior)  
 Start Date: 12/17/14 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 12/17/14 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                          | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 200                            | Identify as per dwg & Stock Location: <b>5285</b> | 0.00                 |         |        |              | 1             |               |                  |                |
| <b>*200*</b>                   |                                                   |                      |         |        |              |               |               |                  |                |
| Packaging                      | Memo                                              | 0.00                 |         |        |              |               |               | JAN 28 2015      |                |
| Packaging                      |                                                   |                      |         |        |              |               |               |                  |                |
| 210                            | QC21- Final Inspection - Work Order Release       | 0.00                 |         |        |              |               |               |                  |                |
| <b>*210*</b>                   |                                                   |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                              | 0.00                 |         |        |              |               |               | 15-02-04         |                |
| Quality Control                |                                                   |                      |         |        |              |               |               |                  |                |

DAS  
06  
9-09

**15-2-4**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



# Picklist Print

December-17-14 1:58:54 PM

Page 1

Work Order ID: 127881

**\*127881\***

Parent Item: D3779-043

**\*D3779-043\***

Parent Item Name: Handle Assembly (Interior)

Start Date: 12/17/14

Required Date: 12/17/14

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-05-20 new issue DD verified by:ec  
IPP Rev:B 08-07-21 procedure change DD verified by:EC IPP Rev:C  
11.12.02 as per dwg revB DD verf:EC

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

|                  |  |              |    |  |  |     |      |         |   |   |  |                   |  |
|------------------|--|--------------|----|--|--|-----|------|---------|---|---|--|-------------------|--|
| D3203-1          |  | Manufactured | No |  |  | 180 | Each | 30.0000 | 1 | 1 |  | DAS<br>30<br>9-89 |  |
| <b>*D3203-1*</b> |  |              |    |  |  |     |      |         |   |   |  |                   |  |
| Handle           |  |              |    |  |  |     |      |         |   |   |  |                   |  |

Location Loc Qty Loc Code

ST483 30  
126533 30

|                       |  |           |    |  |  |     |    |         |        |   |  |                   |  |
|-----------------------|--|-----------|----|--|--|-----|----|---------|--------|---|--|-------------------|--|
| M6061T6S.125          |  | Purchased | No |  |  | 100 | sf | 41.2500 | 0.4365 | 1 |  | DAS<br>23<br>9-89 |  |
| <b>*M6061T6S 125*</b> |  |           |    |  |  |     |    |         |        |   |  |                   |  |
| 6061-T6 .125 Sheet    |  |           |    |  |  |     |    |         |        |   |  |                   |  |

Location Loc Qty Loc Code

MAT020 41.25  
m127454 2.25  
m130745 39

|                         |  |           |    |  |  |     |      |         |   |   |  |                   |  |
|-------------------------|--|-----------|----|--|--|-----|------|---------|---|---|--|-------------------|--|
| MS20426AD10-9A          |  | Purchased | No |  |  | 180 | Each | 89.0000 | 4 | 4 |  | DAS<br>30<br>9-89 |  |
| <b>*MS20426AD10-9A*</b> |  |           |    |  |  |     |      |         |   |   |  |                   |  |
| RIVET                   |  |           |    |  |  |     |      |         |   |   |  |                   |  |

Location Loc Qty Loc Code

ST311 89  
125170 1  
M130983 88

MS 20426 A 10-9

M131339 4

15/6/1/23

15-1-13

15/1/23

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

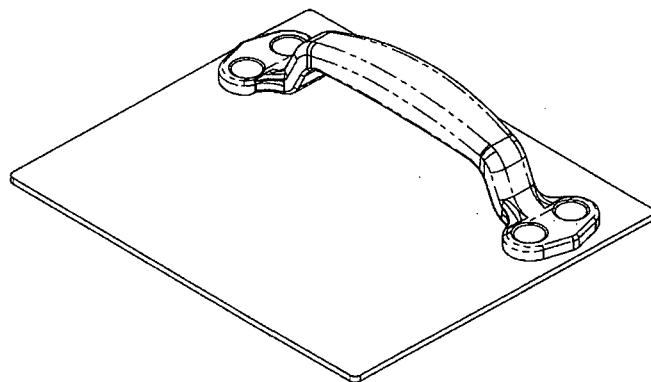
| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

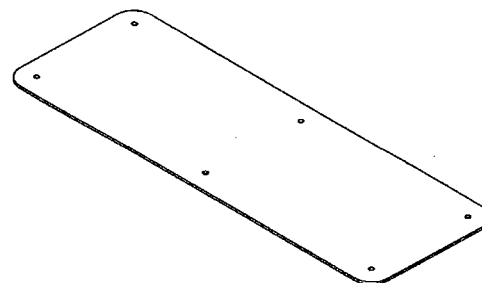
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other                                                                                                                                                                                                                                                          |



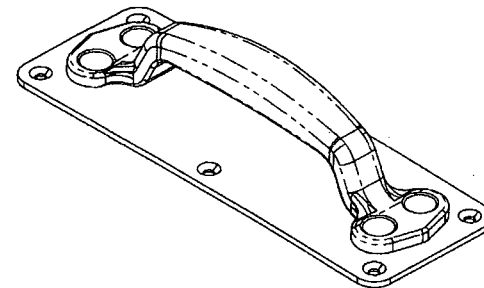
| QTY.<br>-041 | QTY.<br>-043 | PART NUMBER    | DESCRIPTION     |
|--------------|--------------|----------------|-----------------|
| X            |              | D3779-041      | HANDLE ASSEMBLY |
|              | X            | D3779-043      | HANDLE ASSEMBLY |
|              | 1            | D3203-1        | HANDLE          |
| 1            |              | D3779-1        | PLATE           |
|              | 1            | D3779-5        | PLATE           |
| 1            |              | D3779-7        | HANDLE          |
| 4            | 4            | MS20426AD10-9A | RIVET, CSK      |



**D3779-043 HANDLE ASSEMBLY  
(INTERIOR)**



**D3779-3 DOUBLER PLATE**



**D3779-041 HANDLE ASSEMBLY  
(EXTERIOR)**

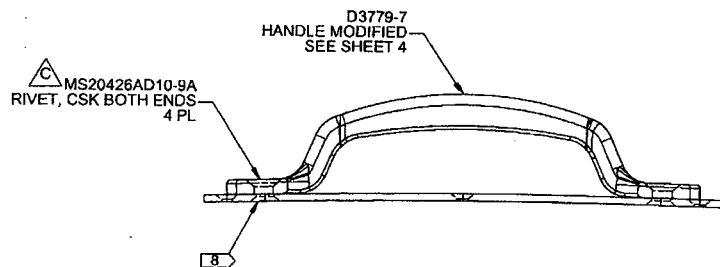
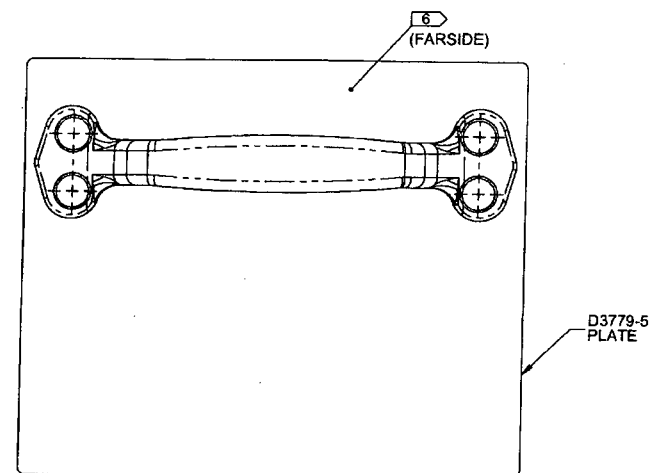
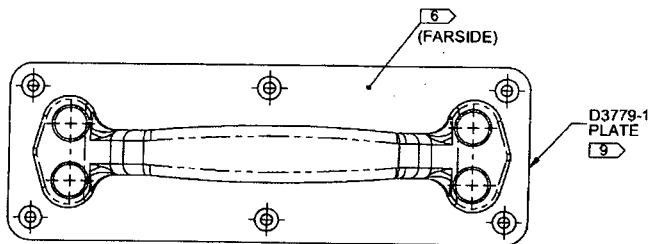
SHOP COPY  
ATTACH TO  
HANDLE ASSEMBLY  
DOUBLER PLATE COPY  
SUBMIT TO MANAGEMENT  
FOR APPROVAL  
WORK ORDER  
127.881 MLCJ  
14-12-23

**RELEASED**  
2012-07-23  
WMP

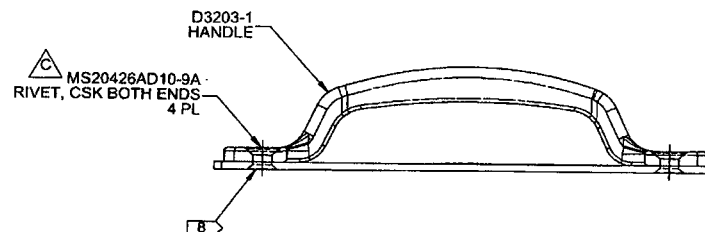
**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: (SEE SHEETS 2 & 3)
- 7) WEIGHT: D3779-3: 0.14 lbs  
D3779-041: 0.71 lbs  
D3779-043: 1.14 lbs

|            |                                                                                                                                |                                                                                                                                                                                                                                                                        |              |
|------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| REV.       | DESCRIPTION                                                                                                                    | BY                                                                                                                                                                                                                                                                     | DATE         |
| C          | CHANGED RIVET FROM -8 TO -9A<br>CHANGED D3779-041 FROM FLAT TO CONTOURED                                                       | RP                                                                                                                                                                                                                                                                     | 12.04.26     |
| B          | REFORMAT IAW DART QSI 043; MS20426AD10-9 WAS<br>MS20426AD10-8 (ZN D6-1, B8/B4-2).<br>REASON: PRODUCTION FACILITY (PART 11-136) | MB                                                                                                                                                                                                                                                                     | 11.11.24     |
| A          | NEW ISSUE                                                                                                                      | AJS                                                                                                                                                                                                                                                                    | 08.04.21     |
| DESIGN     | AJS                                                                                                                            | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                               |              |
| DRAWN      | RP                                                                                                                             |                                                                                                                                                                                                                                                                        |              |
| CHECKED    | A.P.                                                                                                                           | DRAWING NO.                                                                                                                                                                                                                                                            | REV. C       |
| MFG. APPR. | WMP                                                                                                                            | D3779                                                                                                                                                                                                                                                                  | SHEET 1 OF 4 |
| APPROVED   | WMP                                                                                                                            | TITLE                                                                                                                                                                                                                                                                  | SCALE        |
| DE APPR.   | WMP                                                                                                                            | HANDLE ASSEMBLY,<br>CABIN SLIDING DOOR                                                                                                                                                                                                                                 | NTS          |
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**D3779-041 HANDLE ASSEMBLY  
(EXTERIOR)**



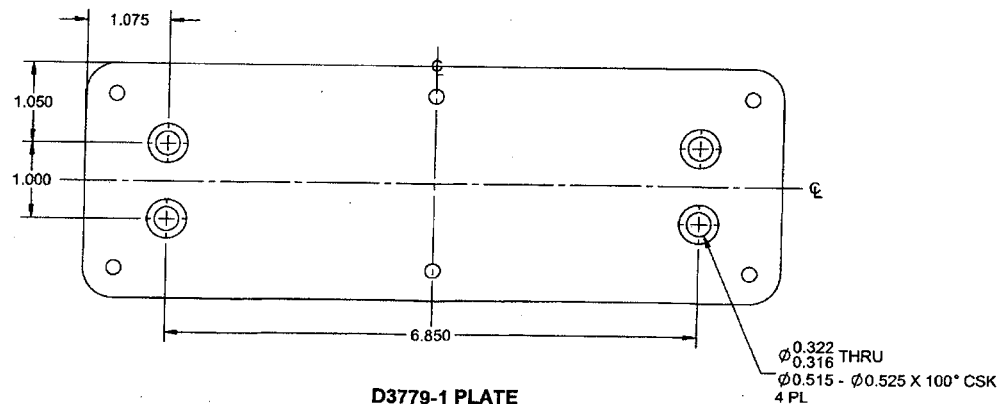
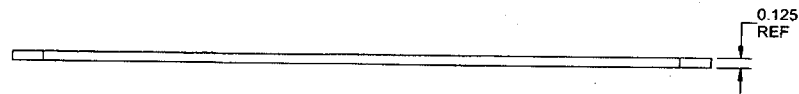
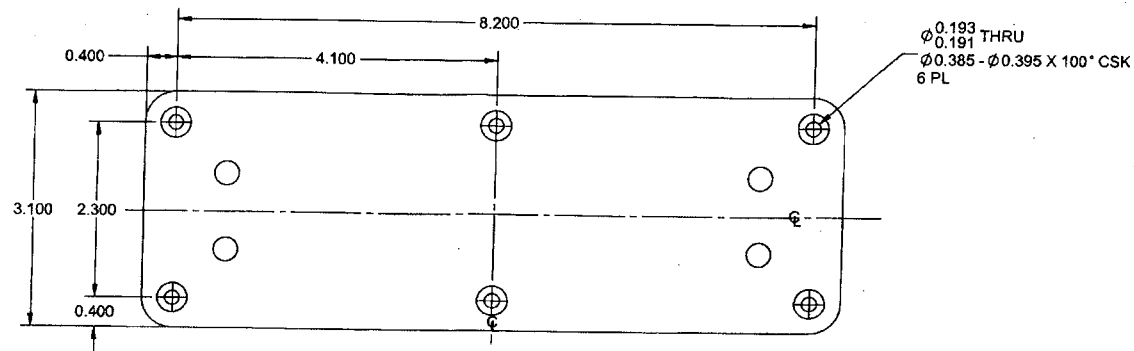
**D3779-043 HANDLE ASSEMBLY  
(INTERIOR)**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3779-XXX" AND B/N "BXXXXX" PER DART QSI 044 6.1
- 7) WEIGHT: D3779-041: 0.71 lbs  
D3779-043: 1.14 lbs
- 8) RIVETS TO BE PEENED AND GROUND FLUSH
- 9) FORMED TO FIT D3779-7 HANDLE DURING ASSEMBLY.

**RELEASED**  
2012-07-23

|            |          |                                                                                                                                                                                                                                                            |              |
|------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | AJS      | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                  |              |
| DRAWN      | RP       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                |              |
| CHECKED    | AP       | DRAWING NO.                                                                                                                                                                                                                                                | REV. C       |
| MFG. APPR. | EP       | D3779                                                                                                                                                                                                                                                      | SHEET 2 OF 4 |
| APPROVED   | AY       | TITLE                                                                                                                                                                                                                                                      | SCALE        |
| DE APPR.   | AY       | <b>HANDLE ASSEMBLY,<br/>CABIN SLIDING DOOR</b>                                                                                                                                                                                                             |              |
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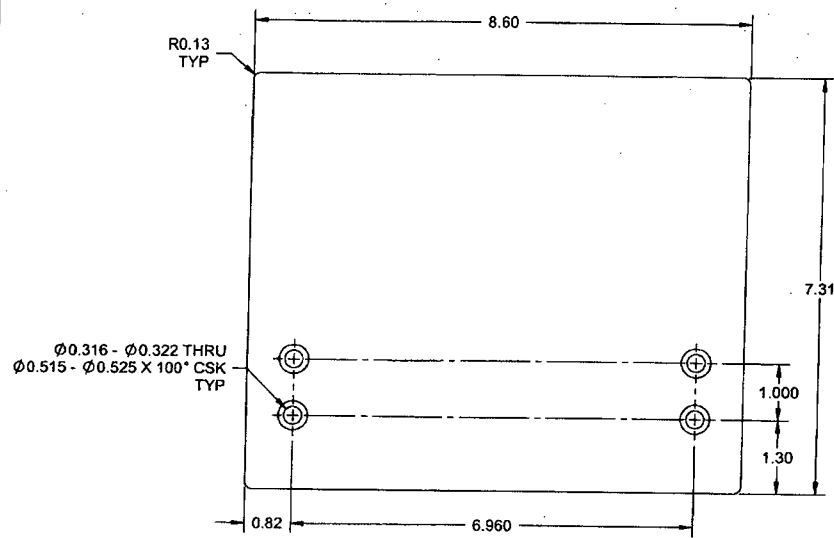
**D3779-1 PLATE**

**RELEASED**  
2012-07-23  
MJB

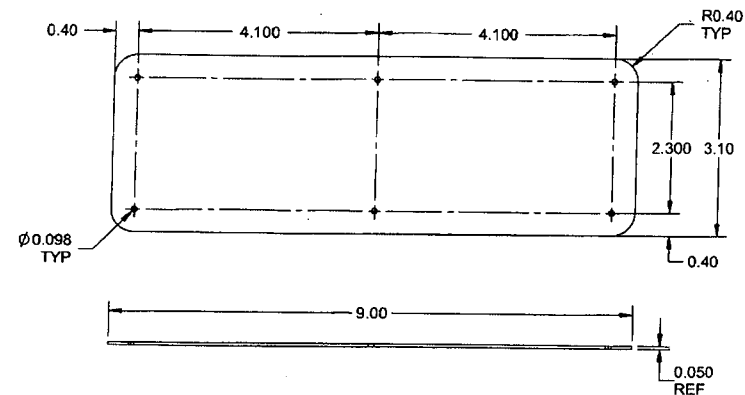
**NOTES:**

- 1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET, 0.125 THICK  
PER AMS-QQ-A-250/11 OR AMS 4027  
(REF DART SPEC M6061T6S.125)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.33 lbs

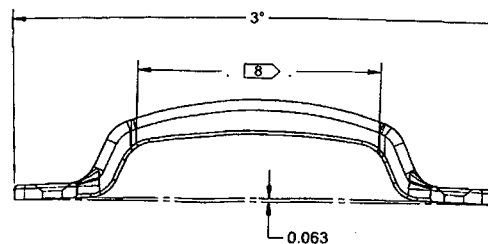
|            |          |                                                                                                                                                                                                                                                                              |                        |
|------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| DESIGN     | AJS      | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                     |                        |
| DRAWN      | RP       |                                                                                                                                                                                                                                                                              |                        |
| CHECKED    | A.P.     | DRAWING NO.                                                                                                                                                                                                                                                                  | REV. C                 |
| MFG. APPR. | E.O.     | <b>D3779</b>                                                                                                                                                                                                                                                                 | SHEET 3 OF 4           |
| APPROVED   | MJB      | TITLE                                                                                                                                                                                                                                                                        | HANDLE ASSEMBLY, SCALE |
| DE APPR.   | MJB      | <b>CABIN SLIDING DOOR</b>                                                                                                                                                                                                                                                    | NTS                    |
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**D3779-5 PLATE**



**D3779-3 DOUBLER PLATE**



**D3779-7 HANDLE, MODIFIED**

**NOTES:**

**1) MATERIAL:**

D3779-3: 6061-T6 (OR 6061-T62) ALUMINUM SHEET, 0.050 THICK  
PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027  
(REF DART SPEC M6061T6S.050)

D3779-5: 6061-T6 (OR 6061-T62) ALUMINUM SHEET, 0.125 THICK  
PER AMS-QQ-A-250/11 OR AMS 4027  
(REF DART SPEC M6061T6S.125)

D3779-7: MADE FROM D3203-1

2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: D3779-3: IDENTIFY WITH DART P/N "D3779-3" AND B/N "BXXXXX" PER DART QSI 044 6.1

D3779-5: NONE  
D3779-7: NONE

7) WEIGHT: D3779-3: 0.14 lbs

D3779-5: 0.76 lbs

D3779-7: 0.38 lbs

8) BEND HANDLE THROUGH THIS AREA ONLY

**RELEASED**  
2012-07-23

|            |          |                                                                                                                                                                                                                                                                                |              |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | AJS      | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                      |              |
| DRAWN      | RP       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                    |              |
| CHECKED    | AP       | DRAWING NO.                                                                                                                                                                                                                                                                    | REV. C       |
| MFG. APPR. | AP       | D3779                                                                                                                                                                                                                                                                          | SHEET 4 OF 4 |
| APPROVED   | AP       | TITLE                                                                                                                                                                                                                                                                          | SCALE        |
| DE APPR.   | AP       | HANDLE ASSEMBLY,<br>CABIN SLIDING DOOR                                                                                                                                                                                                                                         | NTS          |
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## David Bain

---

**From:** David Shepherd  
**Sent:** Friday, January 30, 2015 3:31 PM  
**To:** David Bain  
**Subject:** FW: PAR 14-383

Sorry ... See below ... Thought you were on the email.

Regards,  
David

---

**From:** David Shepherd  
**Sent:** January-29-15 1:17 PM  
**To:** Harvey Siemens  
**Subject:** RE: PAR 14-383

Dave,

I would agree with Harvey that this change can be Passed By Inspection.

Regards,  
David

---

**From:** Harvey Siemens  
**Sent:** January-28-15 1:14 PM  
**To:** David Shepherd  
**Subject:** RE: PAR 14-383

David,

My calculations would indicate that each rivet (of the proposed ones) can handle 1200lbs time 4 per handle would be 4800 lbs per handle.

The change would seem to make sense to me.

Regards,

HS

---

**From:** David Bain  
**Sent:** January-28-15 12:37 PM  
**To:** David Shepherd  
**Cc:** Harvey Siemens; Laith Qatami  
**Subject:** PAR 14-383

David,

I've been tasked with PAR 14-382 concerning a rivet issue with the D3779-041/-043 Handle Assemblies used on D412-698. The currently specified MS20426AD10-9A (AL 2112-14, 26,000 tensile) rivets have been cracking the Handles



during installation. Pat Smith has recommended we change to the MS20426A10-9A (AL 1100-F, 16,000 psi tensile). I checked the Compliance files for this project and it doesn't appear there is any specific testing done to the handle so the question is can we have your approval to make this substitution. (At the same time, I've ordered a Prelim of the D3779-1 with slightly modified hole locations to see if we can improve on the hole alignment between modified handle (D3779-7) and the -1 Plate).

Regards,

DB